Dear Colleagues,

We are just like you and always leave things till just before the deadline (or even just after). The abstract submission deadline for the AGU Fall Meeting is September 7, but in the USA we have the upcoming holiday weekend to complete our essential contributions to this session. The meeting will be held in San Francisco, CA, Dec. 11-15, 2006. We have put together a special session focusing on in situ instruments and critical sample acquisition issues essential to robotic analysis. Our aim is to stimulate and encourage discussion between different disciplines. In furtherance of that end we have organized Invited Papers from a number of people including Jim Garvin (GSFC), to assess the most recent MER results, give a perspective of the promise of MSL/ExoMars and Phoenix and weigh in situ vs. sample return; Steve Gorevan (Honeybee Robotics), to discuss robotic surface and sub-surface sample acquisition hardware developments; Quinn Passey (ExxonMobil Research), to discuss the current state-of-the-art in terrestrial well logging instrumentation, sampling and automated drilling; Jeff Bada (Scripps-UCSD), to discuss trace organic biomarker detection within 1-2 meters of the Martian surface; Angioletta Coradini (IFSI-CNR), to discuss the sub-surface sample acquisition system being developed for the ESA ExoMars mission and Mark Sims (Leicester Univ.) to describe recent developments in the field of in situ instrumentation in Europe. We have promises of papers from a number of people including Dimitri Papanastassiou and Tullis Onstott and even ourselves, the conveners. The session title and description follow.
So, please help us ponder the limitations of in situ instruments and the realities of robotic sub-surface sample acquisition by submitting your abstract at:
http://submissions4.agu.org/submission/entrance.asp

P18: Instruments for in Situ Exploration of Planets: How Do They Measure Up?
Sponsor: Planetary Sciences
CoSponsor: Volcanology, Geochemistry, and Petrology
Convener: Max Coleman, Frank Grunthaner, Pascale Ehrenfreund and Angioletta Coradini

Description: *Planetary exploration missions are becoming increasingly sophisticated in their instrument capabilities, as evidenced by Cassini-Huygens, MER and the NASA MSL and ESA ExoMars selections. In this session we want to engender debate about comparison of current approaches for sample handling and in situ instruments with their terrestrial laboratory counterparts and what future requirements and possibilities might be. We particularly solicit papers addressing the difficulties encountered in maintaining the chemical and structural integrity of surface and sub-surface samples containing hydrated minerals and/or with trace organic contents. Sub part-per-billion levels of organic compounds especially pose problems in controlling contamination and meeting Planetary Protection requirements. We would also encourage some contributions defining which scientific objectives cannot be achieved by in situ methods and therefore must wait for sample-return missions. Papers can relate to any planetary object. Any contributions on topics in these areas will be welcomed from both the planetary and terrestrial geoscience communities.*